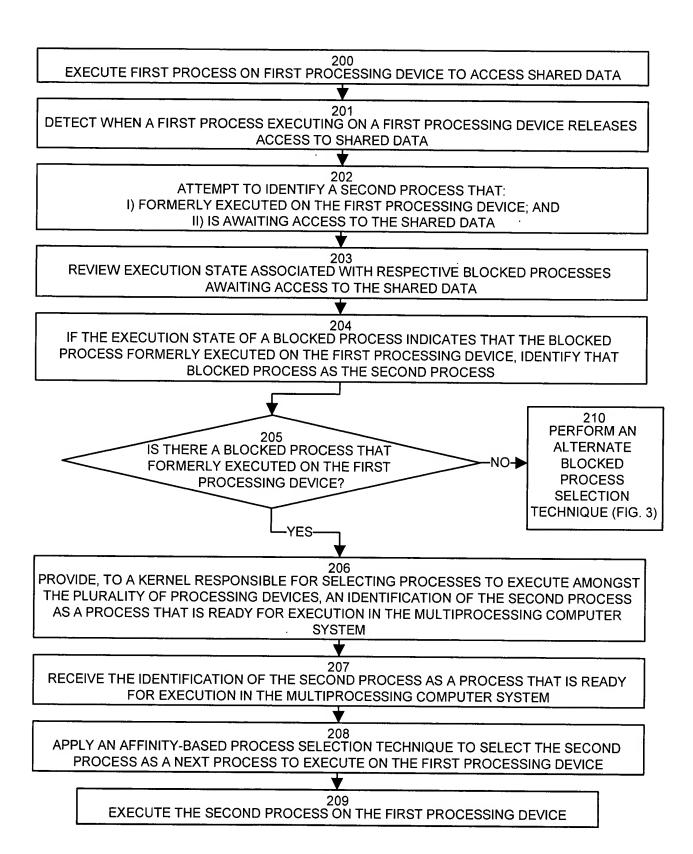


FIG. 1



210 PERFORM AN ALTERNATE BLOCKED PROCESS SELECTION TECHNIQUE (FIG. 3)

220

IDENTIFY, AS THE SECOND PROCESS THAT IS READY FOR EXECUTION IN THE MULTIPROCESSING COMPUTER SYSTEM, A BLOCKED PROCESS THAT IS AWAITING ACCESS TO THE SHARED DATA AND THAT EXECUTED LEAST RECENTLY AS COMPARED TO OTHER BLOCKED PROCESSES AWAITING ACCESS TO THE SHARED DATA

221

APPLY A FORCIBLE MIGRATION TECHNIQUE TO THE IDENTIFIED BLOCKED PROCESS THAT HAS AN EXECUTION STATE INDICATING THAT THE BLOCKED PROCESS EXECUTED FORMERLY ON A PROCESSING DEVICE OTHER THAN THE FIRST PROCESSING DEVICE TO CAUSE THE IDENTIFIED BLOCKED PROCESS TO MIGRATE TO THE FIRST PROCESSING DEVICE WHEN EXECUTED BY THE KERNEL AND TO BE IDENTIFIED TO THE KERNEL AS THE SECOND PROCESS FOR EXECUTION ON THE FIRST PROCESSING DEVICE

OR

222

APPLY A FORCIBLE MIGRATION TECHNIQUE TO AT LEAST ONE BLOCKED PROCESS
THAT HAS AN EXECUTION STATE INDICATING THAT THE BLOCKED PROCESS
EXECUTED FORMERLY ON A PROCESSING DEVICE OTHER THAN THE FIRST
PROCESSING DEVICE AND THAT IS AWAITING ACCESS TO THE SHARED DATA TO
CAUSE THE AT LEAST ONE BLOCKED PROCESS TO MIGRATE TO THE FIRST
PROCESSING DEVICE WHEN EXECUTED BY THE KERNEL AND TO BE IDENTIFIED TO
THE KERNEL AS THE SECOND PROCESS FOR EXECUTION ON THE FIRST
PROCESSING DEVICE



223

DETECT THAT THE FORCIBLE MIGRATION TECHNIQUE HAS BEEN APPLIED TO THE AT LEAST ONE BLOCKED PROCESS THAT HAS AN EXECUTION STATE INDICATING THAT THE BLOCKED PROCESS EXECUTED MOST RECENTLY ON A PROCESSING DEVICE OTHER THAN THE FIRST PROCESSING DEVICE AND THAT IS AWAITING ACCESS TO THE SHARE DATA AND IN RESPONSE, MIGRATING THE AT LEAST ONE BLOCKED PROCESS FOR EXECUTION ON THE FIRST PROCESSING DEVICE



224

MIGRATE THE AT LEAST ONE BLOCKED PROCESS FOR EXECUTION ON THE FIRST PROCESSING DEVICE



APPLY A NON-AFFINITY-BASED PROCESS SELECTION TECHNIQUE TO SELECT THE AT LEAST ONE BLOCKED PROCESS AS A NEXT PROCESS TO EXECUTE ON THE FIRST PROCESSING DEVICE

250 DETECT AN EXECUTION BEHAVIOR PATTERN FOR PROCESSES THAT ACCESS SHARED DATA

251

CALCULATE AN AMOUNT OF BLOCKED ACQUIRE OPERATIONS FOR ACCESS TO THE SHARED DATA THAT HAVE OCCURRED OVER A PERIOD OF TIME, THE BLOCKED ACQUIRE OPERATIONS PERFORMED BY PROCESSES THAT ATTEMPT ACCESS TO THE SHARED DATA BUT THAT RESULT IN THE PROCESS BEING BLOCKED FOR ACCESS TO THE SHARED DATA BY THE SYNCHRONIZATION SCHEDULER

252
CALCULATE AN AVERAGE HOLD TIME FOR ACCESSES TO THE SHARED DATA THAT HAVE OCCURRED OVER A PERIOD OF TIME PERFORMED BY PROCESSES THAT ACCESS TO THE SHARED DATA

253

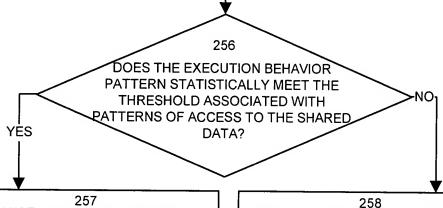
DETERMINE IF THE EXECUTION BEHAVIOR PATTERN STATISTICALLY MEETS A THRESHOLD ASSOCIATED WITH PATTERNS OF ACCESS TO THE SHARED DATA

254

DETERMINE IF THE AMOUNT OF BLOCKED ACQUIRE OPERATIONS MEETS A
THRESHOLD

255

DETERMINE IF THE AVERAGE HOLD TIME FOR ACCESSES TO THE SHARED DATA MEETS A THRESHOLD



257
CAUSE A SYNCHRONIZATION
SUBSYSTEM RESPONSIBLE FOR
CONTROLLING ACCESS TO THE
SHARED DATA TO PERFORM THE
OPERATIONS OF FIG. 2.

CAUSE THE KERNEL TO PERFORM A
NORMAL SUCCESSOR SELECTION
PROCESS FOR SELECTION OF
PROCESSES TO SUCCEED EACH
OTHER DURING EXECUTION